Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Progeny LMS, LLC	)	
	)	WT Docket No. 11-49
Petition for Waiver of the Rules	)	
And Request for Expedited Treatment	)	

COMMENTS OF ITRON, INC.

Itron, Inc. ("Itron"), by its attorneys, submits these comments in response to the Petition for Waiver ("Waiver Request") filed by Progeny LMS, LLC ("Progeny") in the above-referenced proceeding.[1] Itron is concerned about the potential impact of Progeny's proposed Multilateration-Location and Monitoring Service ("M-LMS") operations on Part 15 operations in the 902-928 MHz band. In light of the fact that the band is shared between M-LMS and Part 15 users, Itron urges the Commission to proceed cautiously in considering this or any future requests for waiver by M-LMS licensees.

Progeny claims that its proposed new system would reduce the potential for interference to Part 15 devices.[2] The record, however, does not provide sufficient evidence to assess this claim. In particular, Progeny does not adequately address three waiver-related factors that might increase the potential for interference to Part 15 operations:

- The number of transmissions may increase because Progeny proposes to expand the permitted uses of monitoring-LMS frequencies;

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[1] *Progeny LMS, LLC, Petition for Waiver of the Rules and Request for Expedited Treatment*, WT Docket No. 11-49 (filed March 8, 2011) ("Waiver Request").
[2] Waiver Request at 11 and 14-15.

- The number of transmitters may increase because Progeny proposes to provide service to indoors locations; and
- There is an interplay between the Waiver Request and rule changes that have been proposed in a pending M-LMS rulemaking proceeding.[3]

In the event Progeny's Waiver Request nevertheless is granted, the Commission should state explicitly that the waiver is limited to the specific facts presented by Progeny, and does not serve as a precedent for additional waivers sought by Progeny or other M-LMS licensees.

BACKGROUND

Itron is the nation's leading manufacturer and supplier of Automatic Meter Reading ("AMR") technologies that use unlicensed Part 15 devices operating across the 902-928 MHz band. Itron supplies its RF-based Advanced Metering Infrastructure ("AMI") and AMR systems to electric, gas, and water utility companies nationwide, enabling smart grid operations by allowing utilities to monitor business and residential meters from remote locations. Itron's 902-928 MHz unlicensed operations consist of more than just house-mounted units, as utility consumption information is transmitted from Part 15 meter modules to pole mounted transceivers (known as cell control units or "CCUs") or to mobile devices (known as Mobile Collectors or "MCs") that operate in the band. To date, Itron has shipped more than 50 million meter modules to utility companies nationwide.

Progeny, an M-LMS licensee, seeks a waiver of two M-LMS rules. Progeny asks the Commission to waive the M-LMS build-out requirement, Section 90.155(e),[4] so that it may satisfy that requirement using a system that transmits using just one transmission path (forward links/beacon signals).[5] Progeny also seeks a waiver of Section 90.353(f)[6]

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[3] *In the Matter of Amendments of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz bands*, Notice of Proposed Rulemaking, WT Docket 06-49, 21 FCC Rcd 2809 (2006) ("M-LMS NPRM").

[4] 47 C.F.R. § 90.155(e).

[5] Waiver Request at i and 5-7.

so that it may provide location monitoring services to non-vehicular mobile devices on an equal basis as vehicular devices.[7] In addition, Progeny requests that the Commission consider its Waiver Request on an expedited basis.[8]

DISCUSSION

The Commission has recognized the importance of unlicensed operations in the 902-928 MHz band,[9] and the present M-LMS rules were carefully crafted to allow for the coexistence of M-LMS systems with Part 15 devices (as well as other users). A waiver that increases the potential for M-LMS systems to interfere with Part 15 operations would undermine this balance. Itron addresses below three elements of Progeny's Waiver Request that might increase interference potential.

Expanded Use of the M-LMS Spectrum

The Commission specifically limits the types of services that M-LMS licensees can provide. At present, in order to facilitate band sharing with unlicensed devices and other users, M-LMS location monitoring can be performed only with vehicular mobile devices.[10] In its Waiver Request, Progeny seeks to expand permitted uses by putting non-vehicular mobile devices on an equal footing with vehicular mobile devices. Progeny claims that because its system would be "broadcast only" other users would not be affected by any associated increase in the number of mobile devices utilizing the network.[11]

Progeny overlooks the impact its proposal would have on the number of forward link transmissions. If Progeny's request to expand the uses that are permitted for its M-

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[6] 47 C.F.R. § 90.353(g).
[7] Waiver Request at i-ii and 12-15.
[8] Waiver Request at ii and 15-16.
[9] *See, e.g.*, M-LMS NPRM at ¶ 3.
[10] M-LMS NPRM at ¶ 8.
[11] Waiver Request at 13.

LMS systems is granted, it is reasonable to assume Progeny's systems will have more mobile units. If there are more mobile units, they will need additional forward link transmissions to support them. Adding forward link transmissions could increase the potential for interference to other devices operating in the band in two ways. [12]

First, if the forward links are transmitted from the top 0.75 MHz of the band, then Progeny would operate more of the higher-powered forward links that are permitted on those frequencies.[13] Although in earlier times Itron did not use this portion of the band, today Itron's systems includes devices that operate across virtually the entire 902-928 MHz band, including on channels in the upper reaches of the band. Itron believes the same is true of other Part 15 users. Second, if the forward links are located in the other sub-bands in which forward link transmissions are permitted,[14] then the power level of forward link transmissions would be lower (30 watts vs. 300 watts ERP),[15] but many more transmitters would be required to achieve a functional system. Either way, having more transmissions or transmitters increases the potential for interference.

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[12] While Progeny states that its network would require a small number of transmitters compared to "standard cellular development," it is unclear how many transmitters would be used, especially given the need to achieve transmissions indoors.

[13] Higher-powered forward links may transmit on 927.750-928.000 MHz, 927.500-927.750 MHz and 927.250-927.500 MHz. *See* 47 C.F.R. § 90.357. Many unlicensed devices in the 902-928 MHz band employ spread-spectrum technologies. If the receivers of these devices miss transmissions due to an increased number of higher-powered M-LMS forward link transmissions, this would degrade performance because it will take longer to transmit data. Devices with shorter range times, such as mobiles, would be most susceptible.

[14] The rules allow M-LMS systems to transmit low-power forward links in the 904.000-909.750 MHz, 919.750-921.750 MHz and 921.750-927.250 MHz sub-bands. *See* 47 C.F.R. § 90.357. It is unclear from the Waiver Request whether Progeny intends to operate its beacon signals (*i.e.* forward links) in the upper portion of the band, the lower frequency beacon sub-bands, or both.

[15] *See* 47 C.F.R. § 90.357.

Indoor Use of Progeny's System

Progeny states that its system will provide location monitoring of devices, likely cellphones and smartphones, located indoors.[16] Indoor applications were not contemplated when the M-LMS rules were developed. It appears, therefore, that the provision of M-LMS services indoors would require the use of additional transmitters to penetrate walls effectively and provide reliable service. Adding transmitters to support indoor location monitoring increases the potential for interference to other users. This factor also needs to be taken into account.

M-LMS NPRM

In March 2006, in response to a Petition for Rulemaking submitted by Progeny, the Commission issued a Notice of Proposed Rulemaking ("M-LMS NPRM") seeking comment on a number of changes to the M-LMS rules.[17] The M-LMS NPRM considered a broad-range of issues related to use of the M-LMS service, including: 1) whether to modify or eliminate the types of permissible M-LMS communications; 2) possible changes to M-LMS power limits and other technical rules; 3) whether to eliminate the M-LMS spectrum aggregation limits; and 4) whether to retain the safe harbor provision that protects Part 15 devices from claims of harmful interference, and the field testing requirement that ensures that M-LMS licensees minimize interference to Part 15 devices.[18] Itron, as well as numerous other parties engaged in unlicensed operations on 902-928 MHz, opposed these rule changes.[19] Both Itron and the Part 15 Coalition

[16] Waiver Request at 4.
[17] M-LMS NPRM.
[18] *Id*.
[19] As detailed in the record of that proceeding, Itron and other parties subsequently submitted counterproposals to Progeny's requested rule changes as a potential compromise among the users of the band. *See Counterproposal of the Part 15 Coalition*, ET Docket No. 06-49 (filed June 1, 2007).

submitted technical analyses addressing issues of potential interference to unlicensed operations in the band should Progeny's proposals be adopted.[20]

The Waiver Request does not take into account the interplay between Progeny's proposals in this proceeding and the proposals it made in the rulemaking. For example, in the M-LMS NPRM the Commission considered lowering the maximum M-LMS power limits in order to minimize the potential for interference to Part 15 users if the Commission were to expand the M-LMS services that are permitted.[21] Progeny, on the other hand, does not address in the Waiver Request the possibility of modifying the M-LMS power limits to compensate for the impact of its proposal to expand permitted M-LMS services.

The Waiver Request also does not discuss the impact of any future rule changes on Progeny operations under the proposed waiver. For example, if the Commission changes the types of permissible communications in the rulemaking, what would be the cumulative impact if Progeny modified its system to take advantage of such rule changes in addition to the changes permitted under a waiver? The Commission should consider these issues before acting on the Waiver Request.

Implications of Grant of the Waiver Request

Progeny's statement that it is "only" seeking a waiver of two rules "at this time"[22] suggests that additional waiver requests may be planned. Furthermore, grant of the Waiver Request may lead to waiver requests from other M-LMS licensees. Any request beyond the pending Waiver Request should not be presumed and should require a fresh evaluation of the issues.

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[20] *The Part 15 Coalition, Amendments of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands*, Notice of Ex Parte, WT Docket No. 06-49 (filed June 15, 2007); *see also Progeny LMS, LLC Petition for Rulemaking to Amend Part 90 of the Commission's Rules Governing the Location and Monitoring Service*, Comments of Itron, Inc. on Progeny White Paper, RM-10403 (filed Jan. 10, 2003).

[21] *See* M-LMS NPRM at ¶ 28.

[22] Waiver Request at 7.

CONCLUSION

As the Commission has recognized, the services provided by unlicensed devices in the 902-928 MHz band, including the smart grid applications provided by Itron (and other) devices, are in the public interest. The prospect of increasing the potential for interference to these services is cause for concern. The Commission, therefore, should give careful consideration to the impact Progeny's proposed waiver would have on Part 15 users, and should take into account the issues raised above.

Respectfully submitted,

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